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| 10/620,856 | 07/15/2003 | Stefan Desseloch | SVL920020048US1/3793P | 9144 |
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| SAWYER LAW GROUP LLP P.O. BOX 51418 PALO ALTO, CA 94303 | | | | EXAMINER COLAN, GIOVANNA B |
| | | ART UNIT 2162 | | PAPER NUMBER |
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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| | | |
|------------------------------|--------------------------------------|--|
| Office Action Summary | Application No. 10/620,856 | Applicant(s) DESSLOCH ET AL. |
| | Examiner GIOVANNA COLAN | Art Unit 2162 |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
 - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
 - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED. (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 19 February 2008.
 2a) This action is FINAL. 2b) This action is non-final.
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1, 4-13, 15, 18-27, and 46 -50 is/are pending in the application.
 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
 5) Claim(s) _____ is/are allowed.
 6) Claim(s) 1, 4-13, 15, 18-27, and 46 -50 is/are rejected.
 7) Claim(s) _____ is/are objected to.
 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
 10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) Notice of References Cited (PTO-892)
 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
 3) Information Disclosure Statement(s) (PTO/SB/08)
 Paper No(s)/Mail Date _____
- 4) Interview Summary (PTO-413)
 Paper No(s)/Mail Date _____
 5) Notice of Informal Patent Application
 6) Other: _____

DETAILED ACTION

1. This action is issued in response to the Amendment filed on 02/19/2008.
2. No claims were amended. Claims 2-3, 14, 16 – 17, and 28-45 were canceled. No claims were added.
3. This action is made Final.
4. Claims 1, 4-13, 15, 18-27, and 46 -50 are pending in this application.
5. Applicant's arguments filed 02/19/2008 have been fully considered but they are not persuasive.

Specification

6. The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Correction of the following is required: the term "computer-readable medium" is not explicitly defined in the specification.

Claim - 35 USC § 101

7. For purposes of examination, the term computer-readable medium (in claims 1, 4-13, 46-50) is being treated as hardware (see specification; page 2, lines 25; page 3, 1 – 3; page 21, 8 – 10; and page 7, 1-10).

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

10. Claims 1, 4 – 13, 15, 18 – 27, and 46 – 50 are rejected under 35 U.S.C. 103(a) as being unpatentable over Graham Spencer (Spencer hereinafter) (US 5,577,241) in view of Witkowski et al. (hereinafter Witkowski) (US Patent No. 6,775,662 B1).

Regarding Claims 1, 15, and 46, Spencer discloses a computer readable medium encoded with a computer program for representing a query statement having an atomic query element and a combined query element related by a combined operator, the atomic query element being a noniterative query element, the combined query element including a left subelement and a right subelement, the computer program comprising computer executable instructions for:

defining an abstract superclass, wherein an instance of the abstract super class represents the query element ([57], Abstract, "...The query architecture is based on an abstract base class of query nodes, or code objects that retrieve records from the database. Specific subclasses for particular query models are derived from the base class. Each query node class includes a search function that iteratively searches the database for matching records....", Spencer) and includes an operation on a combination of the combined operator, the query element, and the combined query element (Col. 3, lines 23 – 37, Spencer).

Spencer also discloses: defining a first subclass of the abstract subclass, wherein an instance of the first subclass represents a query element (Col. 3, lines 50 – 57, Spencer). However, Spencer does not explicitly disclose that such instance of the first subclass represents the atomic query element. On the other hand, Witkowski

discloses that: an instance of the first subclass represents the atomic query element (Fig. 5, item 521, Col. 11, lines 2 – 5, Witkowski). It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the Witkowski's teachings to the system of Spencer. Skilled artisan would have been motivated to do so, as suggested by Witkowski (Col. 4 – 5, 66-67 and 1 – 9; respectively, Witkowski), to conserve resources that would otherwise be wasted by generating rows that could not possibly satisfy the criteria.

Furthermore, the combination of Spencer in view of Witkowski discloses:

defining a second subclass of the abstract superclass, wherein an instance of the second subclass represents the combined query element including the left subelement and the right subelement (Fig. 2, item 201.X and 203.X, Col. 6, lines 16 – 22, Spencer), and wherein each of the left subelement (Fig. 5, item 524, Col. 11, lines 1 – 5, Witkowski¹) and right subelement are representable by an instance of the first subclass or the second subclass of the abstract super class (Fig. 5, item 514, Col. 11, lines 7 – 9, Witkowski²);

indicating a relationship between the first subclass and the second subclass defined by the combined operator (Col. 4, lines 58 – 64, Spencer; and Col. 12, lines 32 – 36, Witkowski).

¹ Wherein “gc = 1” corresponds to the left subelement claimed.

² Wherein “gc = 1 AND d>0” corresponds to the right subelement claimed.

Regarding Claims 4, 18, and 47, the combination of Spencer in view of Witkowski discloses a computer readable medium, wherein:

the instance of the abstract superclass represents a table reference (Col. 11, lines 38 – 46, Witkowski);

the instance of the first class represents an unjoined table (Fig. 5, item 521, Col. 10 and 11, lines 60 – 62 and 2 – 4; respectively, Witkowski); and

the instance of the second class represents a joined table (Fig. 5, item 513, Col. 10, lines 34 – 35, joined by operator “OR”, Witkowski).

Regarding Claims 5, 19, and 48, the combination of Spencer in view of Witkowski discloses a computer readable medium, wherein:

the instance of the abstract superclass represents a value expression ([57], Abstract, Spencer Fig. 5, item 511, Col. 11, lines 11 – 13, Witkowski³);

the instance of the first subclass represents an atomic value expression (Col. 3, lines 50 – 57, Spencer; and Fig. 5, item 521, Col. 10 and 11, lines 60 – 61 and 2 – 5; respectively, Witkowski); and

the instance of the second subclass comprises a combined value expression (Fig. 2, item 201.X and 203.X, Col. 6, lines 16 – 22, Spencer; and Fig. 5, item 513, Col. 11, lines 7 – 9, Witkowski⁴).

³ Witkowski discloses root node 511 that references the value expression of : “**where (a>3 AND (b<1 OR b=0) AND (gc=1 OR (gc=0 AND d>0) OR (c=0 and d<0)))**” (Col 10, lines 33 – 35, Witkowski).

⁴ Witkowski (Fig. 5) discloses a parent node (item 513), which corresponds to the second subclass, and nchild nodes (items 524, 514, 515, 525, 526, 527, and 528), which correspond to a combined value expression (Col. 12, lines 21 – 23, “**gc=1 OR (gc=0 AND d>0) OR (c=0 and d<0)**”, Witkowski).

Regarding Claims 6, 20, and 49, the combination of Spencer in view of Witkowski discloses a computer readable medium, wherein:

the instance of the abstract superclass represents a search condition ([57], Abstract, Spencer; and Fig. 5, item 511, Col. 11, lines 11 – 13, Witkowski⁵);
the instance of the first subclass represents an atomic search condition (Col. 3, lines 50 – 57, Spencer; and Fig. 5, item 521, Col. 10 and 11, lines 60 – 61 and 2 – 5; respectively, Witkowski); and

the instance of the second subclass represents a combined search condition (Fig. 2, item 201.X and 203.X, Col. 6, lines 16 – 22, Spencer; and Fig. 5, item 513, Col. 11, lines 7 – 9, Witkowski⁶).

Regarding Claims 7, 21, and 50, the combination of Spencer in view of Witkowski discloses a computer readable medium, wherein:

the instance of the abstract superclass represents a group-by query element ([57], Abstract, Spencer; and Col. 6, lines 38 – 40, Witkowski);
the instance of the first subclass represents a group (Col. 3, lines 50 – 57, Spencer; and Col. 11, lines 16 – 17, Witkowski); and

⁵ Witkowski discloses root node 511 that references the value expression of : “**where (a>3 AND (b<1 OR b=0) AND (gc=1 OR (gc=0 AND d>0) OR (c=0 and d<0)))**” (Col 10, lines 33 – 35, Witkowski).

⁶ Witkowski (Fig. 5) discloses a parent node (item 513), which corresponds to the second subclass, and nchild nodes (items 524, 514, 515, 525, 526, 527, and 528), which correspond to a combined value expression (Col. 12, lines 21 – 23, “**gc=1 OR (gc=0 AND d>0) OR (c=0 and d<0)**”, Witkowski).

the instance of the second subclass represents a grouping set (Fig. 2, item 201.X and 203.X, Col. 6, lines 16 – 22, Spencer; and Col.11, lines 34 – 37, Witkowski).

Regarding Claims 8 and 22, the combination of Spencer in view of Witkowski discloses a structure, wherein the combined query element comprises a nested query language element (Fig. 5, item 514, 525, and 526, Col. 10, lines 33 – 35, element 514 comprising: “**(gc=0 AND d>0)**” is nested over element 513 comprising: “**(gc=1 OR (gc=0 AND d>0) OR (c=0 and d<0))**”, Witkowski).

Regarding Claims 9 and 23, the combination of Spencer in view of Witkowski discloses a structure, wherein the combined query element comprises an iterative query language element (Col. 11, lines 26 – 27, Witkowski⁷).

Regarding Claims 10 and 24, the combination of Spencer in view of Witkowski discloses a structure, further comprising:

means for receiving the query statement (Fig. 1, item 110, Col. 6, lines 29 – 32, Witkowski) having the atomic query element (Col. 10, line 34, **a>3**, Witkowski) and the combined query element associated by the combined operator (Col. 10, line 34, **gc=1 OR (gc=0 AND d>0) OR (c=0 and d<0)**, Witkowski); and

⁷ Witkowski discloses a method for recursively creating parent nodes (item 513 in Fig. 5 is a parent node and also corresponds to the second subclass in the superclass). This method, utilizing recursion, involves repetition, recurrence, and/or iteration. In addition, Witkowski also discloses a method for processing conjunctions, which would later be used in the predicate query tree of Fig. 5, including an iterative loop (Col. 8, lines 37 – 38).

means for populating the structure respectively with instances of the abstract superclass ([57], Abstract, Spencer), the first subclass (Col. 3, lines 50 – 57, Spencer), and the second subclass that represent the received query statement (Fig. 2, item 201.X and 203.X, Col. 6, lines 16 – 22, Spencer; and Fig. 4, items 410, 420, and 430, and 440, Col. 10, lines 57 – 58, Witkowski).

Regarding Claims 11 and 25, the combination of Spencer in view of Witkowski discloses a structure, wherein the means for receiving the query statement includes means for receiving the query statement from a user-interface (Col. 4, lines 43 – 47, Spencer; and Fig. 6, item 618, Col. 13, lines 64 – 67, Witkowski).

Regarding Claims 12 and 26, the combination of Spencer in view of Witkowski discloses a structure, wherein the means for receiving the query statement includes means for receiving the query statement from an application interface (Col. 4, lines 43 – 47, Spencer; and Fig. 6, item 618, Col. 13, lines 64 – 67, Witkowski).

Regarding Claims 13 and 27, the combination of Spencer in view of Witkowski discloses a structure, further comprising:

means responsive to selection of a given instance populated within the structure, for retrieving query elements represented by the given instance (Col. 4, lines 44 – 53, Spencer; and Fig. 5, Col. 12, lines 8 – 9, Witkowski); and

means for building a query statement from the retrieved query elements (Col. 4, lines 58 – 64, Spencer; and Fig.5, Col. 12, lines 8 – 9, Witkowski).

Response to Arguments

11. Applicant cannot show non-obviousness by attacking references individually where, as here, the rejections are based on a combination of references.

In re Keller, 208 USPQ 871 (CCPA 1981).

12. Applicant argues that; "Spencer and Witowski fail to disclose a structure that includes an abstract superclass, in which an instance of the abstract super class represents a query statement having an atomic query element and a combined query element related by a combined operator".

Examiner respectfully disagrees. The combination of Spencer in view of Witowski does disclose: a structure that includes an abstract superclass, in which an instance of the abstract super class represents a query statement ([57], Abstract, "...The query architecture is based **on an abstract base class of query nodes**, or code objects that retrieve records from the database. Specific subclasses for particular query models are derived from the base class. Each query node class includes a search function that iteratively searches the database for matching records....", Spencer) having an atomic query element (Col. 3, lines 50 – 57, Spencer; and Fig. 5, item 521, a>3, Col. 10, line 34, and 60 -67, "...a query is a node graph with leaf nodes and parent nodes. **Leaf nodes have no branches extending from them**, parent

nodes have branches extending to child nodes. A child node may be a leaf node or another parent node...”, and **Col. 11, lines 2 – 5, “Predicate tree 501 includes leaf nodes 521, ...”**, since leaf node 521 a>3 does not further divide into branches/trees, examiner interprets leaf node 521 as the atomic query element as claimed, Witkowski) and a combined query element related by a combined operator (Col. 3, lines 23 – 37, Spencer; and Fig. 5, items 524, 513, 514, 525, 526, 515, 527, and 528, Col. 10, line 34, gc=1 OR (gc=0 AND d>0) OR (c=0 and d<0), Witkowski).

Conclusion

13. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.
14. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Points Of Contact

Any inquiry concerning this communication or earlier communications from the examiner should be directed to GIOVANNA COLAN whose telephone number is (571)272-2752. The examiner can normally be reached on 8:30 am - 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Breene can be reached on (571) 272-4107. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Giovanna Colan
Examiner
Art Unit 2162
May 20, 2008
/Jean M Corrielus/
Primary Examiner, Art Unit 2162